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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/649,064

08/27/2003

Luanne J. Rolly

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02/16/2005

HEWLETT-PACKARD COMPANY

Intellectual Property Administration

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EXAMINER

SHAH, MANISH S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No. 10/649,064	Applicant(s) ROLLY ET AL.	
	Examiner Manish S. Shah	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 19-21 & 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hickman et al. (# EP 0956960 A2) in view of Su et al. (# US 5786830).

Hickman et al. discloses the system having swappable ink jet pens including a first pen containing a pigment-based ink jet ink (black ink) (column: 15, line: 45-55); a second ink jet pen containing a dye-based ink-jet ink (cyan ink) (column: 16, line: 5-10), which is being substantially non-reactive with the pigment based ink jet ink (column: 9, line: 14-15; column: 10, line: 1-6; column: 14, line: 30-35). They also disclose that the pigment-based ink includes an effective amount of polymeric dispersant (acrylate) (column: 15, line: 35-50). They also disclose that the dye ink includes biocides, surfactants ([0081]). They also disclose that the pigment based ink and dye based ink is not reacting to each other ([0050], column: 9, line: 14-16).

Hickman et al. differs from the claim of the present invention in that a single service station configured for servicing the first and second ink jet pen.

Su et al. teaches that to clean a print head and preventing from clogging, ink jet system used a single service station to wipes the first and second print heads (element: 70, figure: 1; see Abstract; column: 5, line: 35-65).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the ink jet system of the Hickman et al. by the aforementioned teaching of Su et al. for the purpose of to preventing the nozzle clogging, which increases the life of the print head.

2. Claims 22-23 & 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hickman et al. (# EP 0956960 A2) in view of Su et al. (# US 5786830) as applied to claims 19-21 & 26 above, and further in view of Gummeson (# US 2002/0198289).

Hickman et al. and Su et al. discloses all the limitation of the system except that (1) the dye based ink includes 0.1 to 4% by weight of a dye; from 1 to 3% by weight of 1,5-pentanediol co-solvent; from 7.5 to 15% by weight of a trimethylolpropane co-solvent and an effective amount of water. (2) The ink further includes 5 to 8% by weight of a third co-solvent, with the proviso that the ink vehicle includes at least 20% by weight of total co-solvent.

Gummeson teaches that to get the water fastness printed image, ink composition includes dye based ink includes 2 to 8% by weight of a dye ([0055]); from 1 to 30% by weight of 1,5-pentanediol and trimethylolpropane co solvent (humectants) ([0063]). They also teaches that ink composition includes anti curling agent (third co-solvent) from 5 to 50% by weight ([0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Hickman et al. as modified by the aforementioned teaching of Gummeson in order to have a bleed free, water fastness printed image.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hickman et al. (# EP 0956960 A2) in view of Su et al. (# US 5786830) and Gummeson (# US 2002/0198289) as applied to claims 22-23 above, and further in view of Ohta et al. (# US 5954866).

Hickman et al., Su et al. and Gummeson discloses all the limitation of the system except that the ink vehicle further including from 0.05 to 0.25% of a 2-amino-2-(hydroxymethyl)-1,3-propanediol buffer.

Ohta et al. teaches that to prevent the nozzle from clogging and increase the storage stability of ink further includes appropriate amount of the 2-amino-2-(hydroxymethyl)-1,3-proanediol buffer (column: 8, line: 58-61).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the buffer taught by the Ohta et al. in to the ink set of Hickman et al. to prevent the nozzle from clogging and increase the storage stability of ink, and which increase the life of the print head.

4. Claims 27-28 & 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hickman et al. (# EP 0956960 A2) in view of Gummeson (# US 2002/0198289) and Su et al. (# US 5786830).

Hickman et al. discloses the system having swappable ink jet pens including a first pen containing a pigment-based ink jet ink (black ink) (column: 15, line: 45-55); a second ink jet pen containing a dye-based ink-jet ink (cyan ink) (column: 16, line: 5-10), which is being substantially non-reactive with the pigment based ink jet ink (column: 9, line: 14-15; column: 10, line: 1-6; column: 14, line: 30-35). They also disclose that the pigment-based ink includes an effective amount of polymeric dispersant (acrylate) (column: 15, line: 35-50). They also disclose that the dye ink includes biocides, surfactants ([0081]). They also disclose that the pigment based ink and dye based ink is not reacting to each other ([0050]; column: 9, line: 14-16).

Hickman et al. differs from the claim of the present invention in that: (1) the dye based ink includes 0.1 to 4% by weight of a dye; from 1 to 3% by weight of 1,5-pentanediol co-solvent; from 7.5 to 15% by weight of a trimethylolpropane co-solvent and an effective amount of water; and (2) a single service station configured for servicing the first and second ink jet pen.

Gummeson teaches that to get the water fastness printed image, ink composition includes dye based ink includes 2 to 8% by weight of a dye ([0055]); from 1 to 30% by weight of 1,5-pentanediol and trimethylolpropane co solvent (humectants) ([0063]; [0069]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Hickman et al. by the aforementioned teaching of Gummeson in order to have a bleed free, water fastness printed image.

Su et al. teaches that to clean a print head and preventing from clogging, ink jet system used a single service station to wipes the first and second print heads (element: 70, figure: 1; see Abstract; column: 5, line: 35-65).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the ink jet system of the Hickman et al. by the aforementioned teaching of Su et al. for the purpose of to preventing the nozzle clogging, which increases the life of the print head.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hickman et al. (# EP 0956960 A2) in view of Su et al. (# US 5786830) and Gummeson (# US 2002/0198289) as applied to claims 27-28 above, and further in view of Ohta et al. (# US 5954866).

Hickman et al., Su et al. and Gummeson discloses all the limitation of the system except that the ink vehicle further including from 0.05 to 0.25% of a 2-amino-2-(hydroxymethyl)-1,3-propanediol buffer.

Ohta et al. teaches that to prevent the nozzle from clogging and increase the storage stability of ink further includes appropriate amount of the 2-amino-2-(hydroxymethyl)-1,3-proanediol buffer (column: 8, line: 58-61).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to incorporate the buffer taught by the Ohta et al. in to the ink set of Hickman et al. as modified to prevent the nozzle from clogging and increase the storage stability of ink, and which increase the life of the print head.


**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manish S. Shah  
Primary Examiner  
Art Unit 2853

  
MSS  
2/9/05